UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Water Resources Division

RECORDS OF WATER LEVEL AND PUMPAGE FOR 1969

IN JOSHUA TREE NATIONAL MONUMENT

CALIFORNIA

Prepared in cooperation with the
National Park Service

BASIC-DATA COMPILATION

Menlo Park, California
1970

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ILLUSTRATIONS

TABLES

RECORDS OF WATER LEVEL AND PUMPAGE FOR 1969 IN JOSHUA TREE NATIONAL MONUMENT, CALIFORNIA

By C. A. Miller

This report, prepared at the request of the National Park Service, is part of a continuing inventory by the Geological Survey of general hydrologic conditions at Joshua Tree National Monument. The report includes water levels in selected observation wells in the monument for spring and autumn 1969 and pumpage data from Kaiser Steel Corp. for its wells in Pinto Basin during 1969. Data on pumpage prior to 1969 and on water levels prior to those shown are published in U.S. Geological Survey Water-Supply Paper 1475-O and in previous annual reports to the National Park Service.

Hydrographs of observation wells in the monument (fig. 2) show a general, irregular, decline in ground-water level of from less than 10 feet to more than 75 feet during the period of record, 1958-69. There is little correlation between the magnitude of water-level decline and pumping; for example, there is little or no pumping in the area near well 1S/7E-27R1 (Willets well), where the largest decline in water level occurred. Most of the decline is probably due to the relative dryness of the period. Increased precipitation during the last few years caused the water level in some wells to rise, but not to 1958 levels. The large storms that occurred in part of coastal southern California during January and February 1969 did not reach the monument area.

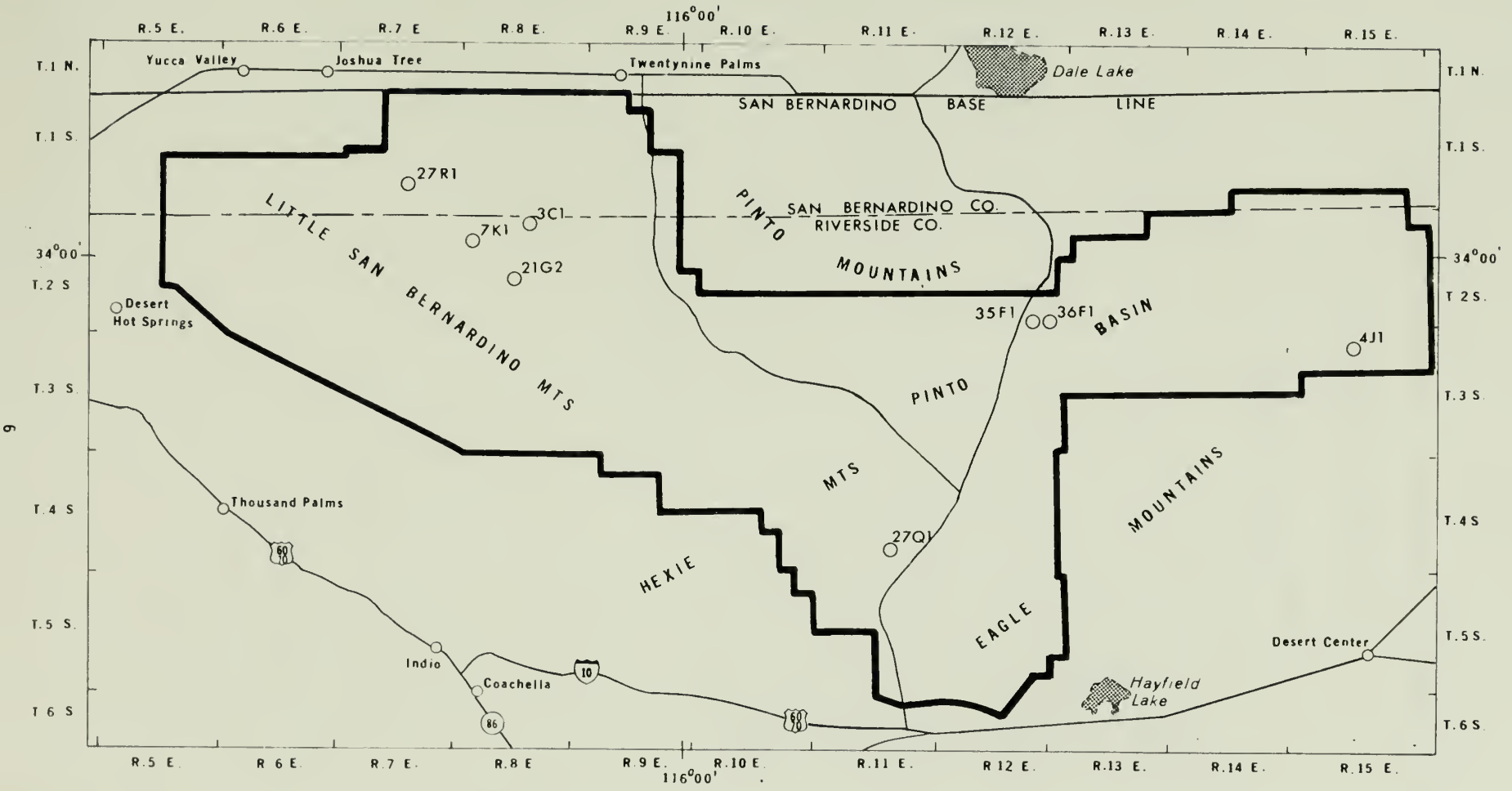

FIGURE 1.--Map of Joshua Tree National Monument showing location of observation wells.

TABLE 1.--Pumpage from wells in Pinto Basin by Kaiser Steel Corp.,

for the calendar year 1969

[Metered in thousands of gallons
by Kaiser Steel Corp.]

January	54,641
February	50,548
March	55,031
April	85,451
May	120,986
June	121,639
July	97,699
August	91,414
September	93,245
October	79,987
November	47,981
December	50,846
Total[1] (thousands of gallons)	949,000
Total[2] (acre-feet)	2,900

[1]Rounded to three significant figures.
[2]Rounded to two significant figures.

Table 2.--Ground-water levels in observation wells

Depths of wells given in whole feet were reported by owners, drillers, or others; depths given in feet and tenths of a foot were measured below land-surface datum by the U.S. Geological Survey. Measurements are in feet below or above (+) the described point of reference.

Standardized footnotes

a. well being pumped.

b. Well pumped recently.

c. Nearby well being pumped.

d. Nearby well pumped recently.

e. Estimated.

f. Dry.

g. Measurement by outside agency or person.

h. Tape measurement.

i. Affected by outside influence (wind, atmospheric pressure, ocean tides, railroad trains).

j. Water level below sea level.

k. Measurement from recorder chart.

m. Obstruction in well above water surface.

n. No measurement.

UNITED STATES GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

GROUND-WATER LEVELS IN OBSERVATION WELLS

CALIFORNIA COUNTY San Bernardino AREA OR BASIN Copper Mountain Hydro Subunit (X-8.BO)

State number 1S/7E-27R1 S Depth of well 182.0 ft. Altitude of land-surface datum 3,770 feet above mean sea level

Well-code number 340302N1161406.1

Description of well: National Park Service (Willetts Well). In Quail Wash south of Joshua Tree (village) and west of Lost Horse Valley. Drilled unused well in alluvium, diameter 5 inches.

Records available 1958, 1961- Highest water level ____ ft. ____, 19____ Lowest ____ ft. ____, 19____

All water levels are referenced to land-surface datum

1966		1967		1968		1969		1970	
Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 1	129.75	Mar. 15	136.83	Apr. 4	(m)	Apr. 22	(m)		
Oct. 26	134.70	Oct. 25	(m)	Oct. 29	(m)	Oct. 24	159.4		

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State number: 1S/7E-27R1 S

UNITED STATES GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

GROUND-WATER LEVELS IN OBSERVATION WELLS

CALIFORNIA COUNTY Riverside AREA OR BASIN Copper Mountain Hydro Subunit (X-8.80)

State number 2S/8E-3C1 S Depth of well 108 ft. Altitude of land-surface datum 4,300 feet above mean sea level

Well-code number 340149N1160800.1

Description of well: National Park Service (Queen well). South of the Wonderland of Rocks and about 2 miles north of Sheep Pass. Drilled domestic water-table well in residuum, diameter 8 inches.

Records available 1961, 1965- Highest water level ____ ft. ____, 19____ Lowest ____ ft. ____, 19____

All water levels are referenced to land-surface datum

1966		1967		1968		1969		1970	
Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 1	95.74	Mar. 15	92.06	Apr. 5	94.60	Apr. 22	92.01		
Oct. 26	93.25	Oct. 25	91.99	Oct. 30	92.17	Oct. 24	92.28		

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State number 2S/8E-3C1 S

UNITED STATES GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

GROUND-WATER LEVELS IN OBSERVATION WELLS

CALIFORNIA COUNTY Riverside AREA OR BASIN Copper Mountain Hydro Subunit (X-8.80)

State number 2S/8E-7K1 S Depth of well 290 ft. Altitude of land-surface datum 4,100 feet above mean sea level

Well-code number 340042N1161031.1

Description of well: National Park Service (Stokes No. 2). In narrow valley west of Hidden Valley at west side of Lost Horse Valley. Drilled unused well in residuum, diameter 8 inches.

Records available 1961- Highest water level ____ ft. ____, 19____ Lowest ____ ft. ____, 19____

All water levels are referenced to land-surface datum

1966		1967		1968		1969		1970	
Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 1	213.69	Mar. 15	214.93	Apr. 4	215.81	Apr. 22	216.65		
Oct. 26	214.50	Oct. 25	215.46	Oct. 29	216.15	Oct. 24	216.80		

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State number 2S/8E-7K1 S

UNITED STATES GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

GROUND-WATER LEVELS IN OBSERVATION WELLS

CALIFORNIA COUNTY Riverside AREA OR BASIN Copper Mountain Hydro Subunit (X-8.80)

State number 2S/8E-21G2 S Depth of well 43.0 ft. Altitude of land-surface datum 4,480 feet above mean sea level

Well-code number 335903N1160850.1

Description of well: National Park Service (Lost Horse No. 2). East side of Lost Horse Valley near Ryan Campground. Dug public supply well in residuum, diameter 48 inches.

Records available 1961- Highest water level ft. , 19 Lowest ft. , 19

All water levels are referenced to land-surface datum

1966		1967		1968		1969		1970	
Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 1	38.71	Mar. 15	39.72	Apr. 4	41.00	Apr. 22	40.74		
Oct. 26	36.04	Oct. 25	b38.32	Oct. 29	39.14	Oct. 24	40.53		

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State number: 2S/8E-21G2 S

UNITED STATES GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

GROUND-WATER LEVELS IN OBSERVATION WELLS

CALIFORNIA COUNTY Riverside AREA OR BASIN Pinto Hydro Subunit (X-17.CO)

State number 2S/12E-36F1 S Depth of well 444 ft. Altitude of land-surface datum 1,347 feet above mean sea level

Well-code number 335718N1154034.1

Description of well. National Park Service (Dale Holmes well, Gold Rose well). In Pinto Basin, 1 mile east of Gold Crown Road at Mission well. Drilled domestic well in alluvium.

Records available 1961- Highest water level ____ ft. ____, 19____ Lowest ____ ft. ____, 19____

All water levels are referenced to land-surface datum

1966		1967		1968		1969		1970	
Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 3	400.91	Mar. 17	400.51	Apr. 5	400.61	Apr. 23	401.51		
Oct. 28	400.60	Oct. 26	400.37	Nov. 7	(n)		(n)		

State number 2S/12E-36F1 S

UNITED STATES GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

GROUND-WATER LEVELS IN OBSERVATION WELLS

CALIFORNIA COUNTY Riverside AREA OR BASIN Pinto Hydro Subunit (X-17.CO)

State number 3S/15E-4J1 S Depth of well 575 ft. Altitude of land-surface datum 1,080.6 feet above mean sea level

Well-code number 335612N1152433.1

Description of well: National Park Service (Kaiser No. 2). At east end of Pinto Basin near Kaiser Steel Company's Eagle Mountain wells. Drilled well in alluvium, diameter 16 inches.

Records available 1954- Highest water level ____ ft. ____, 19____ Lowest ____ ft. ____, 19____

All water levels are referenced to land-surface datum.

1966		1967		1968		1969		1970	
Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 2	c161.95	Mar. 17	c163.38	Apr. 8	(a)	Apr. 23	(a)		
Oct. 27	c162.94	Oct. 26	c163.78	Nov. 7	(n)	Oct. 23	165.06		

State number 3S/15E-4J1 S

UNITED STATES GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

GROUND-WATER LEVELS IN OBSERVATION WELLS

CALIFORNIA COUNTY Riverside AREA OR BASIN Pinto Hydro Subunit (X-17.CO)

State number 4S/11E-27Q1 S Depth of well 402 ft. Altitude of land-surface datum 2,975 feet above mean sea level

Well-code number 334712N1154856.1

Description of well: National Park Service (Cottonwood well). In Smoketree Wash 3½ miles north of Cottonwood Spring. Drilled public supply well in alluvium, diameter 12 inches.

Records available 1958-61, 1963- Highest water level ____ ft ____ 19____ Lowest ____ ft. ____, 19____

All water levels are referenced to land-surface datum.

1966		1967		1968		1969		1970	
Date	Water level	Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 3	179.44	Mar. 17	180.59	Apr. 5	183.04	Apr. 23	191.48		
Oct. 28	179.49	Oct. 26	181.84	Nov. 7	182.22	Oct. 23	187.26		

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State number 4S/11E-27Q1 S

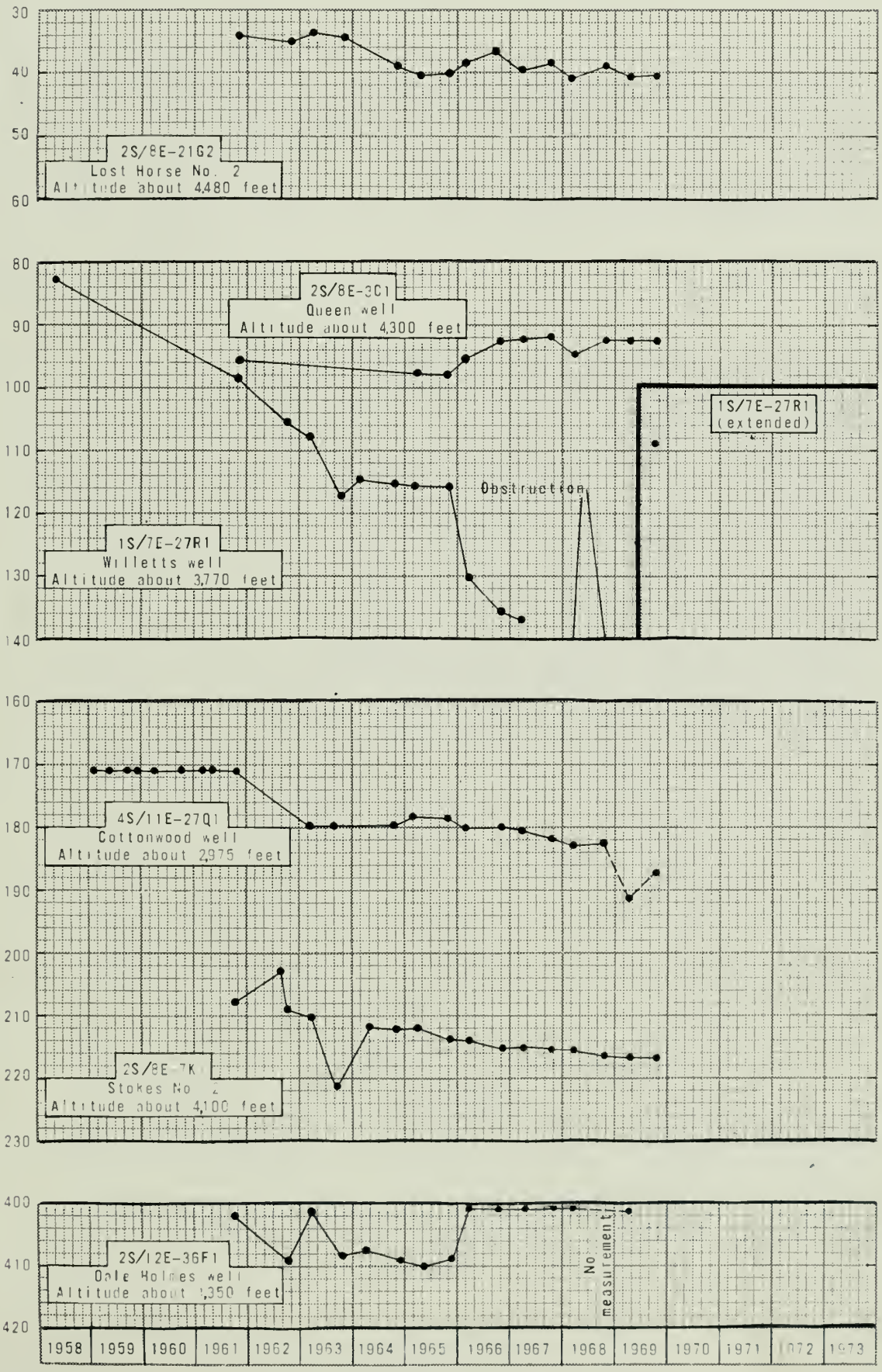

FIGURE 2.--Hydrographs of selected wells in Joshua Tree National Monument.

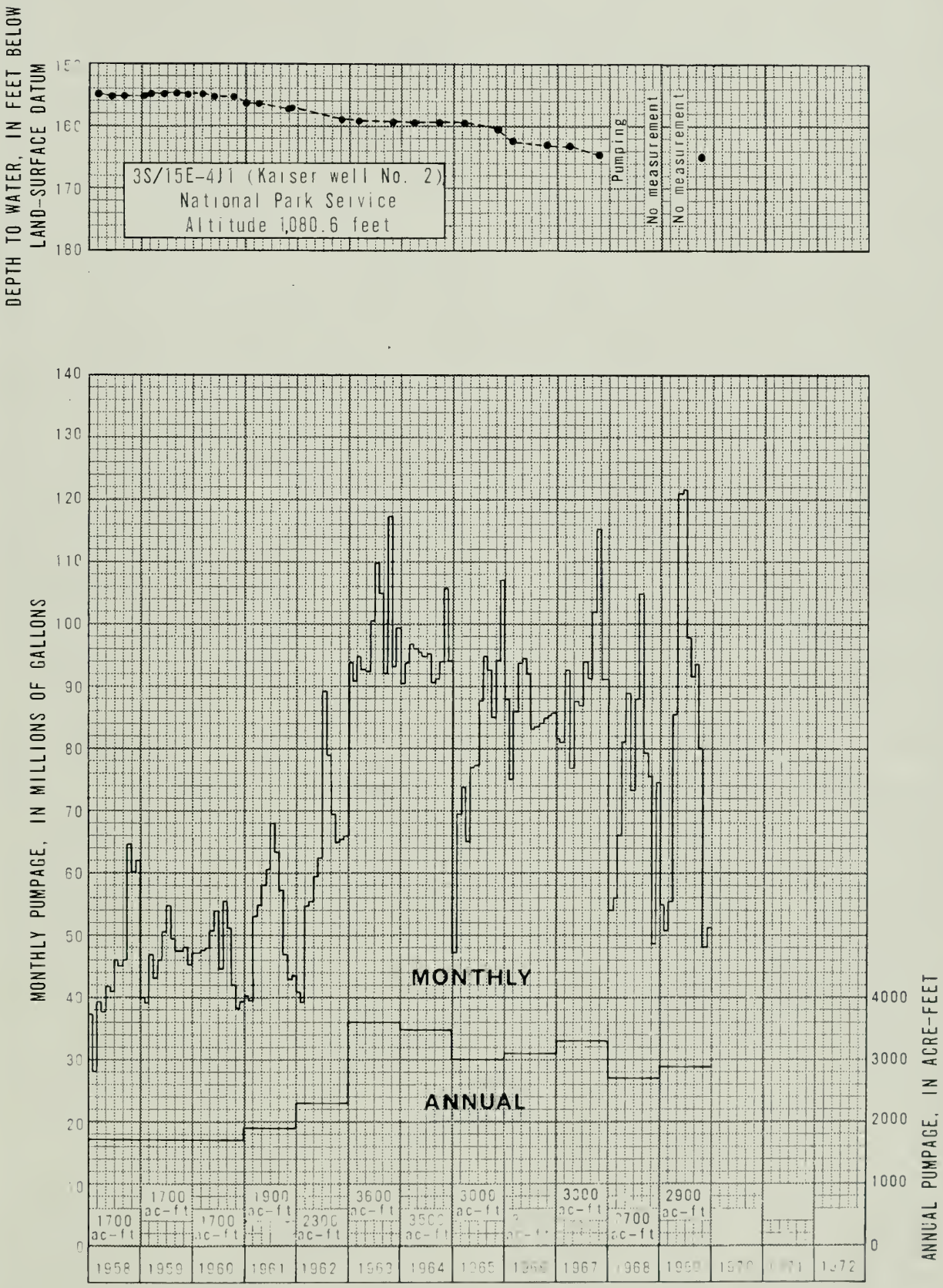

FIGURE 3.--Hydrograph of well and pumpage in eastern part of Pinto Basin.